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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,212	04/02/2004	Steven R. Kleiman	112056-0126D1	2407
24267 7590 09/28/2009 CESARI AND MCKENNA, LLP 88 BLACK FALCON AVENUE BOSTON, MA 02210				
EXAMINER				
NGUYEN, THAN VINH				
ART UNIT		PAPER NUMBER		
2187				
MAIL DATE		DELIVERY MODE		
09/28/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/817,212

## Applicant(s)

KLEIMAN ET AL.

## Examiner

Than Nguyen

## Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16, 39, 40 and 45-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 45, 46 and 50 is/are allowed.
- 6) ☒ Claim(s) 1-16, 39, 40, 47-49 and 51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date 7/28/09
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ ~~Notice of Informal Patent Application~~
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 7/28/09 has been entered.

2. Claims 1-16,39,40,45-51 are pending.
3. The IDS, filed 7/28/09, has been considered.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-16,39,40,47-49,51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. As to claim 1, Applicant claims “**selecting a parity subtraction method or a recalculation method for parity calculation based on the method that requires the fewest number of read operations to compute parity for the I/O operations**”. Applicant claims selecting a parity subtraction method or recalculation method for parity calculation based on the method that requires the fewest number of read operations to compute parity. However, Applicant fails to provide how the process of determining which method requires the fewest number of read operations. Without the process of actually first performing each parity

calculation method (subtraction and recalculation), there is no way of determining which one requires the fewest reads. Therefore, Applicant must further include the actually steps of performing each parity method (subtraction and recalculation) to obtain the number of read operations necessary for each method to satisfy the 112, second paragraph, requirement.

7. Claims 1,16,39,40,47,51 has the same deficiency as claim 1 above and are rejected for the same reasons as claim 1.

8. As to claim 2, Applicant claims **“identifying blocks within the plurality of blocks for use by the I/O operations as to substantially maximize chain lengths of reads for calculation of parity”**. Applicant claims identifying blocks to maximize chain lengths but does not provide the steps needed to maximize the chain lengths. Without specific steps to achieve those results, one of ordinary skills cannot make and/or use the invention, as claimed. Thus the claim is indefinite as it does not provide enough information to ascertain how the invention functions since Applicant only claims the result of a step/function without indicating the necessary steps to obtain that result. Applicant must include all the necessary process steps required to identify blocks to maximize chain lengths of reads for calculation of parity to satisfy the 112, second paragraph, requirement..

9. Claims 3-15 are also rejected for incorporating the error of the parent claim.

10. As to claim 47, Applicant claims **“selecting whether to substantially minimize the number of read blocks or to substantially maximize chain lengths of read blocks, and implementing the selection responsive to the block layout information, and responsive to whether substantially minimizing the number of read blocks or substantially maximizing chain lengths of read blocks requires fewer numbers of read operations”**. Applicant failed to indicate

what process is involved in the "implementing the selection" step to realize "substantially minimize the number of read blocks" or "substantially maximizing chain lengths of read blocks", without which one of skills cannot understand how the claimed invention operates/functions to achieve the desired goal. The terms "implementing the selection" is already vague and ambiguous in meaning, which, without further steps defining what is involved in the implementation step, one in the art could not possibly understand how the implementation is implemented to obtain the desired results. Thus, the claim language is vague and indefinite as Applicant fails to recite the necessary steps involved to "implement the selection". Applicant must include all the necessary process steps required to implement the selection to minimize the number of read blocks **and** maximize the chain length of read blocks to satisfy the 112, second paragraph, requirement.

11. Claims 48-49 are also rejected for incorporating the error of the parent claim 47.

***Allowable Subject Matter***

12. Claims 45-46,50 are allowed for reasons indicated previous (6/6/08).
13. Claims 1,2-16,39,40,47-49,51 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The reason for allowable subject matter is indicated in the 6/6/08 Office Action.

***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior arts are in the same field as that of the invention: US 5,778,426 and US 5,506,977.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Than Nguyen whose telephone number is 571-272-4198. The examiner can normally be reached on 8am-3pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christian Chase can be reached on (571) 272-4190. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Than Nguyen/  
Primary Examiner, Art Unit 2187

Than Nguyen  
Primary Examiner  
Art Unit 2187